

REMARKS

The Office Action dated March 13, 2006, has been received and carefully noted. The following remarks are submitted as a full and complete response thereto. Claims 1-48 are currently pending in the application, of which claims 1 and 25 are independent. Claims 1-48 are respectfully submitted for consideration.

Allowable Subject Matter

Claims 8-11, 15-24, 32-35, and 39-48 were objected to as being dependent on a rejected base claim but were indicated as being allowable if they were rewritten in appropriate independent form. Applicants thank the Examiner for this indication of allowability. Applicants respectfully submit that the base claims should be allowed for the reasons explained below. Accordingly, it is respectfully requested that these objections be withdrawn.

Rejections under 35 U.S.C. 102(e)

Claims 1, 4-7, 12-13, 25, 28-31, and 36-37 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,388,584 of Dorward et al. ("Dorward"). Applicants respectfully traverse this rejection.

Claim 1, upon which claims 2-25 depend, is directed to a method for compressing a stream arriving at a compressor. The method includes acquiring a pattern at the compressor by determining a function according to a stream, making sure a decompressor

is synchronized with the compressor according to the pattern, and sending a compressed packet according to the pattern.

Claim 25, upon which claims 26-48 depend, is directed to a compressor for compressing a stream. The compressor includes a means for acquiring a pattern at the compressor: by determining a function according to a stream. The compressor also includes a means for making sure a decompressor is synchronized with the compressor according to the pattern. The compressor further includes a means for sending a compressed packet according to the pattern.

Certain embodiments of the present invention can, with the decompressor, use a pattern to predict the behavior of data. Therefore, these embodiments advantageously do not require the use of a timestamp or a pointer to any timestamp transmitted in the past, since the decompressor knows how to deduce the timestamp from the packet sequence number using the acquired pattern.

Applicants respectfully submit that Dorward does not disclose or suggest all of the elements of any of the presently pending claims, and therefore cannot produce the above-described critical and unobvious advantages.

Dorward generally relates to a method and apparatus for data compression of network packets. As illustrated in Figure 2 and column 6, lines 41-64, Dorward receives an input data stream and examines the packets of the stream. Dorward establishes a history state based on (or as “a function of”) the acknowledgement vector. In other words, Dorward establishes which packets were received by the other end of the stream.

As Dorward explains, any previous packet can be considered history in streaming compression. Accordingly, Dorward keeps track of which packets were received.

Thus, in Dorward the “patterns” which it receives are actually character or symbol sequences. These are repetitive sequences in the data, which are used in compression by substituting subsequent occurrences of the same symbol sequence by pointers to the first occurrence. Thus, Dorward does require the transmission of a timestamp, and/or pointer to a timestamp in the past, in order to perform decompression. This is illustrated, for example, at column 7, lines 55-67, where Dorward indicates that the history vector 340 is used in addition to the sequence number 335, as can also be seen in Figure 3.

It is useful for Dorward to keep track of previously sent packets that have been received, because Dorward is providing compression based on history. Accordingly, by keeping track of packets that have been received, Dorward can reduce bandwidth by maintaining a high level of compression using packet history. In particular, the “history vector” in the header of Dorward’s packet indicates the packets upon which the compression of the current packet is based. By keeping track of which packets have been received, Dorward can ensure that the current packet will be decompressable by the receiving decompressor.

Claims 1 and 25, in direct contrast, recite “acquiring a pattern at the compressor by determining a function according to a stream.” As explained in the specification at page 4, lines 18-27, a pattern that can be identified by determining that a function is, for example, a step function. The Office Action asserted that Dorward discloses “acquiring a

pattern at the compressor by determining a function according to a stream” at column 6, lines 41-64 of Dorward. That passage, however, does not even mention the word “pattern.” Indeed, Dorward only uses the word “pattern” to describe a single kind of “well-known” compression technique, at column 1, lines 33-36.

As explained above, Dorward does not acquire a pattern based on anything. Dorward is not interested in patterns – Dorward is interested in history-based compression. Accordingly, Dorward has no motivation to look for, or acquire patterns. In contrast, as explained in the present application, the decompressor may advantageously acquire a pattern that will permit it to get into a second order state that it would otherwise not be able to reach, as explained in the present specification at page 2, lines 9-14. Accordingly, because Dorward is directed to a very different object, one of ordinary skill in the art would not have been motivated to modify Dorward to perform: “acquiring a pattern at the compressor by determining a function according to a stream.”

Accordingly, it is respectfully submitted that Dorward does not and cannot disclose or suggest all of the elements of claims 1 and 25. Claims 4-7, 12-13, 28-31, and 36-37 depend from claims 1 and 25 respectively, and recite additional limitations. Thus, it is respectfully submitted that each of claims 4-7, 12-13, 28-31, and 36-37 recites subject matter that is neither disclosed nor suggested by Dorward. It is thus respectfully requested that the rejection of claims 1, 4-7, 12-13, 25, 28-31, and 36-37 be withdrawn.

Rejections under 35 U.S.C. 103(a)

Claims 2-3, 14, 26-27, and 38 were rejected under 35 U.S.C. 103(a) as being unpatentable over Dorward in view of U.S. Patent No. 6,839,339 of Chuah (“Chuah”). The Office Action took the position that Dorward disclosed every element of the claims, except “compressing RTP packets.” The Office Action supplied Chuah to remedy the deficiencies of Dorward. Applicants respectfully traverse this rejection.

Claims 2-3, 14, 26-27, and 38 depend respectively from claims 1 and 25 and recite additional limitations. The deficiencies of Dorward with respect to claims 1 and 25 are discussed above. Applicants respectfully submit that Chuah does not remedy the deficiencies of Dorward.

Chuah generally relates to header compression for general packet radio service tunneling protocol (GTP) encapsulated packets. In Figure 14, Chuah illustrates a format for a compressed RTP header that could be used in an RTP header compression protocol. This format is described in some detail at column 7, line 6 to column 9, line 45 including some examples. Chuah, however, is silent as to “acquiring a pattern at the compressor by determining a function according to a stream.”

The combination of Chuah and Dorward, accordingly, does not disclose or suggest “acquiring a pattern at the compressor by determining a function according to a stream,” because Chuah does not remedy the deficiencies of Dorward. Therefore, it is respectfully submitted that the combination of Chuah and Dorward does not disclose or suggest all of


the elements of any of the presently pending claims. It is thus respectfully requested that the rejection of claims 2-3, 14, 26-27, and 38 be withdrawn.

Conclusion

For the reasons explained above, it is respectfully submitted that each of claims 1-48 recites subject matter that is neither disclosed nor suggested in the cited references. It is therefore respectfully requested that all of claims 1-48 be allowed, and that this application be passed to issue.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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